2.6. Geographical Distribution of AIDS by County and Region

2.6.1. Cumulative Cases and Case Rates

The map (Figure 2.6.1) identifies cumulative total AIDS cases by county and Health Department Region for 1982 through 1995. Shelby and Davidson Counties, followed by Hamilton and Knox Counties, led the non-metropolitan counties and county clusters designated as regions in volume of AIDS cases. Individual non-metropolitan counties with high numbers of AIDS cases relative to similar counties are: Washington (n=87), Sullivan (n=80), Rutherford (n=64), Madison (n=62), Montgomery (n=52), Sumner (n=52), Bradley (n=49) and Blount (n=43) Counties. Counties with the lowest volume of cases are those reporting 0 to 4 cases. They are identified on the map[27].

In terms of volume of AIDS cases, the four metropolitan regions/counties form two groups. Shelby and Davidson Counties had the highest absolute numbers of AIDS cases in the State. They had four to five times the number of AIDS cases as the other two metropolitan counties, and their dominance has persisted. Trends for Davidson and Shelby Counties were similar over time, with Shelby leading in numbers of AIDS cases in each year of observation. Similar to the pattern for Davidson and Shelby Counties, but at a much lower level, trends for Hamilton and Knox Counties closely paralleled one another (Figure 2.6.2a). This Figure also shows the rise in case reports beginning in 1992, attributable in part to changing definitions of HIV/AIDS, with peaking of cases in 1993 in Shelby and Davidson Counties. Hamilton and Knox Counties appear less susceptible to definitional changes than did the larger counties.

Figure 2.6.2b shows the numbers of AIDS cases reported by year of diagnosis in non-metropolitan Health Department Regions from 1990 through 1995. The results suggest that the Mid Cumberland region, a suburban and relatively wealthy cluster of counties surrounding Davidson County in Middle Tennessee, generally had the highest case numbers. The peaking in 1993 can be observed for most of these regions, as was noted above for the larger metropolitan regions. Although 1995 data suggest some divergence from overall trends, extreme care must be taken with incomplete data. The combined impact of reporting delay (with regional variations unknown) and the 1993 expansion of surveillance case definition make interpretation of trends in AIDS case diagnosis over time precarious, particularly when case numbers are small.

Total AIDS case rates by region and per 100,000 population by year of diagnosis for the period 1990-1995 reveal several differences (Table 2.6.1). First, cases and case rates increased sharply from 1992 to 1993 due to definitional changes, affecting all regions, although not uniformly (Figure 2.6.3).

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[27] It should be noted that each Tennessee county is allocated to one of 14 regions based on Bureau of Health Services, TDH, designations. The numbering of regions throughout this report follows a different scheme than that used by the TDH STD/HIV Program. Appendix 2 contains conversion information.